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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,756	11/27/2001	Heinz Epping	GK-EIS-1041	2148

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EXAMINER

HARVEY, DIONNE

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/830,756	Applicant(s) EPPING ET AL.	
	Examiner Dionne N. Harvey	Art Unit 2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-29, 38, 39 and 41 is/are rejected.
- 7) ☒ Claim(s) 30-37 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show width of the sound inlet as described in page 8 of the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore:

a. The “width” of the sound inlet which is determined along the periphery of the microphone, as recited in claims 25 and 26;

b. The “opening” of the closure element as recited in claim 29.

...Must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 25,26 and 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

a. Regarding claims 25 and 26, the specification fails to clearly describe how one of ordinary skill in the art would determine the “width” of the sound inlet by reference to the periphery of the microphone.

b. Regarding claim 29, the specification fails to enable one of ordinary skill in the art to construct a closure element having an opening which corresponds to a mouth opening of the sound passage. Clarification is required.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Regarding claim 29, recites "a closure element...has an opening which substantially correspond to a mouth opening of the sound passage".

Looking at Figure 1, provided by the Applicant, and assuming that the "closure element" references the sealing element **23**; that "opening" of the closure element references the opening of duct **29**; and that the "mouth opening of the sound passage" references the opening of orifice **19**, it is unclear how the opening of the closure element "correspond[s]" to the mouth opening of the sound passage. Clarification OR cancellation is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-29 and 38,39 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by **Hagey (US 4,410,770)**.

Regarding claim 22, in figure 1, Hagey teaches a microphone comprising a diaphragm (48) having a first surface, being in the direction of the ambient air, and second surface being in the direction of the microphone housing; the first surface oriented toward the sound source (originating from ambient) and the second surface which is at least partially acoustically separated from the first surface via mounting at its'

Art Unit: 2643

perimeter portion to the end surface (38) of ring (36), the second surface facing away from the sound source; at least one slit-shaped sound inlet (45) through which sound waves pass to the second surface forming an acoustic inductance so that the passed sound waves have a delay; and at least one damping element (68); said sound inlet having an acoustic resistance being less than the damping element; and wherein the sound waves first pass through said slit-shaped sound inlet (45) before reaching said at least one damping element (68).

Regarding claim 23, Hagey teaches that the damping element is formed by a sound passage (62) provided with acoustic damping material (68) and which connects a cavity (73) to the volume (102) delimited by the second diaphragm surface.

Regarding claim 24, Hagey teaches that the sound inlets have a substantially rectangular cross section (see aperture 46).

Regarding claim 25, Hagey teaches that the height of the inlet (45) is less than the length via beveled surface (34), that sound flow is along a longitudinal direction, and as best understood with respect to the U.S.C. 112 first paragraph rejection above, Hagey appears to teach that the length of the inlet is less than the width of the sound inlet extending circumferentially.

Regarding claim 26, as best understood with respect to the U.S.C. 112 first paragraph rejection above, Hagey appears to teach that the width of the sound inlet corresponds to the periphery of the microphone.

Regarding claim 27, Hagey teaches that the left-most portion of sound inlet 42, also provides a fixing portion for the diaphragm, thus reading on "sound inlet comprises a diaphragm fixing portion".

Regarding claim 28, Hagey teaches that the peripheral edge of the diaphragm (50) is fixed to diaphragm fixing portion (36,38).

Regarding claim 29, as best understood with regard to the U.S.C 112 first and second paragraph rejections above, Hagey appears to teach a closure element arranged in front of a mouth of a sound duct having an opening substantially corresponding to the mouth opening of the sound passage and which is provided with acoustic damping material.

Regarding Claim 38, In figure 1, Hagey teaches that the diaphragm portion (36) substantially encloses the second diaphragm surface and the sound inlet is formed between a holding portion (see that portion of the diaphragm to which the voice coil is attached) on the diaphragm and the diaphragm fixing portion (36).

Regarding Claim 39, Since bobbins are well known in the art as being annular in shape, the Examiner as interpreted the annular bobbin as providing the "ring" of the claim.

Regarding Claim 41, Hagey teaches the sound inlet being formed between the diaphragm fixing portion (36,38) and a casing portion (14,72) which substantially encloses the second diaphragm surface.

Allowable Subject Matter

Claims 30 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 31-37 are objected to due to their dependency upon claim 30.

Response to Arguments

6. Applicant's arguments filed 9/15/2004 have been fully considered but they are not persuasive.

The Applicant argues “**‘Width’ Is Not The Feature Itself, But Rather An Inherent Dimension Of The Feature Of ‘The Sound Inlet’**”.

This is not persuasive since any feature recited in the claim must be clearly illustrated in the Drawings. Furthermore, one of ordinary skill in the art must be enabled by the Applicant's specification as to how to construct a “width” which is “substantially determined along the periphery of the microphone”, and the specification of Applicant has failed to do so.

The Applicant argues that “**Hagey Does Not Show That The Acoustic Resistance Of The Sound Inlet Is Less Than The Acoustic Resistance Of The Damping Element**”

However, the Examiner is not clear what sound inlet of the Hagey reference, the Applicant is citing as failing to have an acoustic resistance that is less than that of the damping element. In addition to referencing sound inlets (46, 45), the Applicant also makes mention of cloth layer (40), erroneously referenced by the Applicant as, "cloth layer 42".

The Examiner, however, has relied upon open slit (42) as reading on that "sound inlet" of the claim. Hagey teaches that slit (42) has no additional damping material provided therein and therefore by nature has an acoustic resistance less than that of slit (64) which has been provided with additional damping means (68), thereby increasing the acoustic resistance within that slit area.

The rejections are maintained.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2643


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne N Harvey whose telephone number is 703-305-1111. The examiner can normally be reached on 9-6:30 M-F and alternating Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dionne Harvey, Examiner


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Application/Control Number: 09/830,756
Art Unit: 2643

Page 10